#### PHMC Environmental Management Performance Report – November 2001 Section C:2 – River Corridor



# Section C:2 River Corridor

#### **PROJECT MANAGERS**

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#### **SUMMARY**

The River Corridor Project (RCP) consists of the following projects: 300 Area Liquid Effluent Facility (LEF) WBS 1.2.3.2, Project Baseline Summary (PBS) WM05; 300 Area/Special Nuclear Materials, WBS 1.4.4, PBS TP04; Transition Project Management, WBS 1.4.6, PBS TP12; Accelerated Deactivation, WBS 1.4.8, PBS TP10; 324/327 Facility Transition, WBS 1.4.10, PBS TP08; and Hanford Surplus Facility Program (300 Area Revitalization), WBS 1.4.11, PBS TP14.

PBS WM05 is divided between WBS 1.2.3.1, Liquid Effluents (200 LEF) and WBS 1.2.3.2, 310 TEDF/340 Facility (300 LEF). The 310 TEDF/340 Facility work scope is now included in the River Corridor Project, whereas the Liquid Effluents (200 LEF) work scope has remained in Waste Management Project. For the purpose of schedule/cost performance analysis, PBS WM05 is reported in its entirety in the Waste Management Project, which has the majority of the work scope and funding incorporated in its baseline.

NOTE: Unless otherwise noted, all information is as of September 30, 2001.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, and RL) shows that three milestones (75 percent) were completed on or ahead of schedule and one milestone was completed late.

#### TOP 5 ACCOMPLISHMENTS FOR FY 2001

The cleanout of B Cell and shipment of the B Cell waste to the 200 Area Burial Grounds were completed fourteen days ahead of the revised date of July 31, 2001, completing the workscope for M-89-02, "Complete Removal of 324 Building Radiochemical Engineering Cells (REC) B Cell Mixed Waste (MW) and Equipment."

Approximately 380 metric tons of uranium were moved away from the 300 Area and the Columbia River; 240 metric tons of uranium fuel were sent to other DOE sites for future use, and 140 metric tons of uranium scrap and other materials were buried at Hanford's Low-Level Burial Grounds (LLBG).

Through effective deployment of the 327 Building Deactivation Project minimum safety (min-safe) staff, key radiological inventory reductions activities were completed. Activities included: fourteen Legacy Waste Buckets loaded into drums for shipment, with the remaining sixteen buckets consolidated into A Cell for packaging in FY 2002; two PNNL Waste Containers were repackaged for shipment in FY 2002; and twenty-three cans of fissile and irradiated material were removed from the Dry Storage carousel and packaged into drums for shipment, leaving an inventory of eight cans in dry storage.

As part of the accelerated skyline reduction initiative, two water towers were demolished and disposed of in the LLBG, and the 303K Building was demolished to grade and the waste dispositioned to compliant storage.

During FY 2001, the Treated Effluent Disposal Facility (TEDF) treated 66.4 million gallons of wastewater.

#### ADDITIONAL FY 2001 ACCOMPLISHMENTS

In the Equipment Disposition Project (EDP), the first of four tall well cars was shipped from Hanford to Memphis, TN. for recycling, saving taxpayers over \$100,000.

Six grout containers were packaged and shipped to the 200W Burial Grounds, completing RL milestone, "Complete D Cell High Level Vault Treatment System Removal Due 9/30/01." eleven days early. In addition, fabrication of the robot lifting fixture and the support stand were completed in support of the pipe trench cleanout.

The installation of two backflow preventers on the fire suppression system at the 327 Building was completed. Additionally, over five hundred different chemical products were packaged for disposal or recycling; and partial cleanout of I Cell was performed resulting in enough material to fill two concrete-lined drums.

A video inspection of the 340-A above ground tanks was performed and the vault gamma camera evaluation completed.

River Corridor Project saved taxpayers over one million dollars by sending uranium dioxide crystals to researchers at Oak Ridge National Laboratory (ORNL) to be used for research, and by transferring thorium to PNNL, also to be used for research. In addition, the Project completed the non-destructive assay for phase I characterization of E and F Cells at the 224-T Facility; and completed the transfer of twenty-four facilities from Pacific Northwest National Laboratories (PNNL) to Fluor Hanford (FH).

Waste characterization was performed in support of the planned shipment of the second of four tall well cars from Hanford to Memphis, TN. In addition, four of five pieces of heavy equipment were surveyed and released.

#### **ACCOMPLISHMENTS THIS REPORTING PERIOD**

Progress continues on the 324 Building pipetrench cleanout as actual experience with the robot increases. Two crews perform this effort; one using the robot, and the other performing size reduction and related activities in B Cell. Eight of the nine block nozzle obstructions have been removed, and the robot work platform placed on the pipe trench. Loose, long piping and other items were removed from the trays, relocated to B Cell, and size reduced.

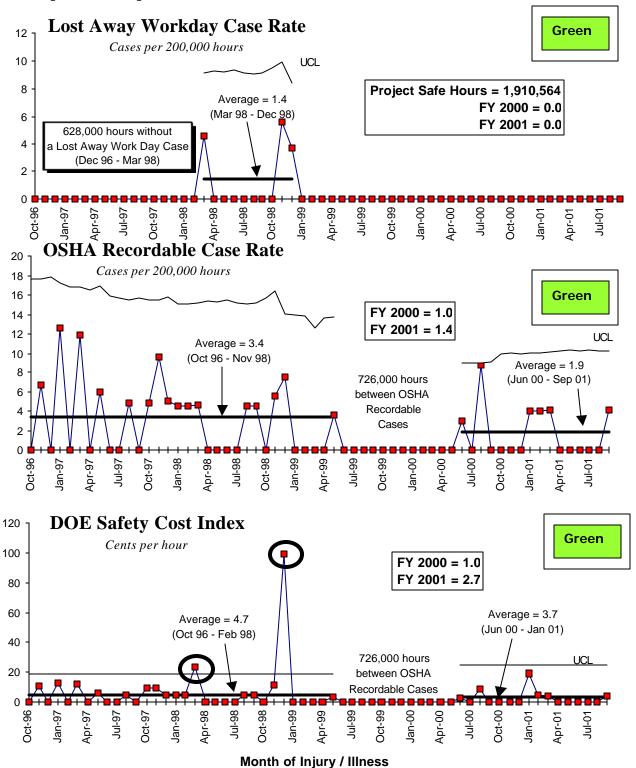
309 Building roof repair activities progressed and are approximately 95 percent complete.

The DOE-Voluntary Protection Program (VPP) on-site review of the RCP occurred the week of October 15. Overall, the review team was very satisfied with the implementation of the VPP tenets by RCP. The final results of this review will not be known until DOE-HQ has had a chance to review the results of the on-site review team.

A 90 percent design review of the Spent Nuclear Fuel packaging and transportation system was conducted.

#### **SAFETY**

At fiscal year-end 2001, the River Corridor Project (RCP) had achieved more than 1.9 million safe work hours since its last lost away workday case. The OSHA Recordable Case Rate was 1.4 and the overall rating for RCP was green.

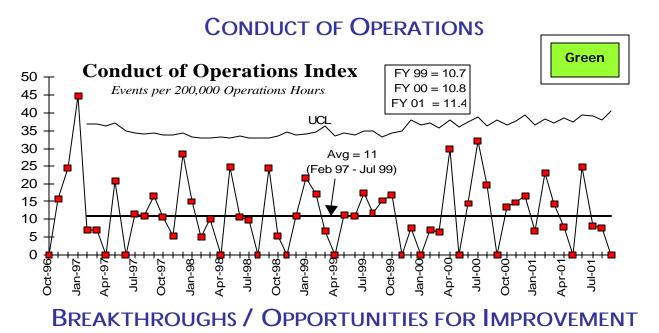


#### **ISMS STATUS**



The River Corridor Project (RCP) ISMS "Sustain and Maintain" process is in place. During 2001, RCP supported the update of the FH annual ISMS training module and the development of an ISMS/VPP Communications Plan through the ISMS Center of Expertise.

During 2001, the RCP Voluntary Protection Program team developed and implemented a strategic plan to support continuous safety improvement, and to enhance the implementation of the safety and health program. This plan also helped to prepare RCP for an on-site review to earn recognition for VPP status from the DOE.



#### Breakthroughs

Technical Review of 327 Hot Cell Removal — Technology Management, supported by RCP, completed a review of the feasibility of intact removal of the hot cells from the 327 Facility during 2001. The review team found the concept of intact removal to be feasible, to have potentially significant As Low As Reasonably Achievable (ALARA) benefits, and that it could reduce the cost by \$2M to \$4M. A hot cell characterization strategy is being prepared to establish the data quality objectives, to identify techniques for obtaining necessary data, and to identify the optimal disposal site. The characterization strategy will be issued in December.

**Permit By Rule Treatment at 300 Area TEDF** — During 2001, FH investigated the potential to treat limited categories of liquid non-radioactive hazardous wastes using the existing capabilities of the 300 Area TEDF by applying a permit exclusion available within the waste regulations. Treatment of hazardous wastes at TEDF could provide a low-cost



option for disposal of some wastes currently sent off-site. The regulatory analysis is complete, and for the next two months the benefits and site needs for waste treatment will be compared against the costs and risks of implementing the treatment. A decision on whether to proceed will be made during the first quarter of FY 2002.

#### Opportunities for Improvement

Conduct of Operations Improvement Initiative – During 2001, RCP initiated a Conduct of Operations Improvement Plan to improve organizational performance, and to effect a change in the Conduct of Operations. The RCP has completed the first two full months of the Conduct of Operations Improvement Plan. Each facility and participating organization has spent time reviewing its Conduct of Operations Matrix, identifying areas of improvement and communicating results to the staff. The project is off to a good start and is well into the third month of assigned activities. Project directors are scheduled to provide a summary review of progress to the RCP Vice President at the two, four and six-month milestones with the first status review completed in October. Completion of the Conduct of Operations Improvement Plan has been incorporated into the facility managers' annual appraisal goals to help communicate the level of importance and support expected for this improvement initiative.

#### **UPCOMING ACTIVITIES**

**327 Authorization Basis (AB)** — Submit the technical update of the 327 Authorization Basis (originally due in May 2001) to RL in October 2001.

**Tall Well Cars** — Ship the second of four tall well cars to Memphis, TN. during the first quarter of FY 2002.

**224-T Phase I Characterization** — Complete Phase I characterization on the remaining five cells at 224-T by December 31, 2001.

**Spent Nuclear Fuel Removal** — Complete vendor equipment fabrication and receipt to support initial mock-up testing by March 2002.

**324/327 Buildings** — Complete 26.5 percent remaining baseline work by June 30, 2002.

**377 Building Demolition** — Complete the demolition of 377 Building and disposition the waste by June 30, 2002.

**Roof Replacement** — Complete installation of new roofs on PUREX and B Plant by September 30, 2002.

#### Milestone Achievement

Green

		FISCAL YEA	R-TO-DATE		REMAI			
MILESTONE TYPE	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	TOTAL FY 2001
Enforceable Agreement	0	0	1	0	0	0	0	1
DOE-HQ	0	0	0	0	0	0	0	0
RL	2	2	0	0	0	0	0	4
Total Project	2	2	1	0	0	0	0	5

Only TPA/EA milestones and all FY 2001 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY 2001 TPA/EA milestone achievement and a Milestone Exception Report follows. The last milestone table summarizes the first six months of FY 2002 TPA/EA milestones.

FY 2001 Tri-Party Agreement / EA Milestones									
Number	Milestone Title	Status							
M-89-02	Complete Removal of 324	M-89-02 is complete.							
	Building Radiochemical								
	Engineering Cells (REC)								
	B-Cell Mixed Waste (MW)								
	and Equipment.								
DNFSB Commitments									
	Nothing to report at this time.								

#### MILESTONE EXCEPTION REPORT

Number/WBS Level Milestone Title Baseline Forecast Date Date

#### Overdue - 0

FY 2002 Tri-Party Agreement / EA Milestones										
Number Milestone Title Status										
MX-92-06-T01	Due 12/31/01 — On schedule.									
	DNFSB Commitments									

#### PERFORMANCE OBJECTIVES

**Outcomes** 

**Performance Indicator** 

**Status** 

Corridor for Multiple Restore the River

FHI-M8 - 300 Area Cleanup

Measure 1: Accelerate 300 Area Cleanup Expectation 1: Deactivate 324/327

**Buildings** 

Base: Complete 26.5% remaining 324/327-baseline work by June 30, 2002.

Base: Complete B Cell cleanout and shipment of B Cell waste to 200 Area Burial Grounds.

Stretch: Complete additional 2.5% remaining 324/327-baseline work.

**Expectation 2: Disposition surplus** facilities

Base: Disposition 3902A, 3802B & 303-K by September 30, 2001. Stretch: Disposition 377 Bldg. by June 30, 2002.

Expectation 3: Disposition uranium billets, uranium dioxide, scrap materials in 200/300 Areas, and 303-K thorium-232 by September 30, 2001.

Measure 2: Support RCP Contract Transition

Expectation 1:

Stretch: Support RCP contract transition by July 1, 2002.

Of the remaining life-cycle work scope, 14.9 percent was completed during the period of October 2000 through September 2001.

Complete.

As of September 30, 2001, the subproject completed an additional .5 percent (\$1.64M) toward the stretch goal.

Complete.

Waste disposition planning has begun with the Low-Level Burial Ground. A Notice of Construction with WDOH is in preparation. Engineering for the building demolition will begin October 29, 2001.

Complete.

A draft transition plan has been prepared.

Plateau to support Fransition Central long-term wast FHI-M3 – 200 Area Facility Disposition

Measure 1: Disposition Surplus Buildings and Rolling Stock

Expectation 1:

Base: Decontaminate &

Decommission (D&D) 233-S & 233-SA Facilities by September 30, 2004.

Stretch: D&D 233-S & 233-SA by

June 30, 2004.

Expectation 2: Complete installation of new roofs on PUREX & B Plant by

September 30, 2002.

Work will be initiated July 1, 2002.

Work will be initiated July 1, 2002.

A contract for sampling of the roof material and radiological surveys has been issued to BHI.

NOC development is underway.

Expectation 3:

Base: Disposition contaminated railcars by June 30, 2006.

Stretch: Disposition contaminated railcars by August 31, 2005.
Super stretch: Disposition

contaminated railcars and heavy equipment by September

30, 2003.

Waste characterization is being performed in support of the planned first quarter shipment of the second of four tall well cars from Hanford to Memphis. TN.

Nothing to report.

Four of five pieces of regulated heavy equipment have been surveyed and released for beneficial reuse.

### FY 2001 SCHEDULE / COST PERFORMANCE – ALL FUND TYPES CUMULATIVE TO DATE STATUS – (\$000)

Green Green

		FYTD												
	By PBS	ı	BCWS	ı	BCWP		ACWP		SV	%	CV	%		BAC
PBS TP04 WBS 1.4.4	300 Area/ Special Nuclear Materials	\$	4,426	\$	4,413	\$	4,317	\$	(13)	0%	\$ 96	2%	\$	4,426
PBS TP12 WBS 1.4.6	Transition Program Management	\$	6,747	\$	6,724	\$	6,617	\$	(23)	0%	\$ 107	2%	\$	6,747
PBS TP10 WBS 1.4.8	Accelerated Deactivation	\$	3,611	\$	3,518	\$	3,731	\$	(94)	-3%	\$ (213)	-6%	\$	3,611
PBS TP08 WBS 1.4.10	324/327 Facility Transition	\$	34,542	\$	33,786	\$	32,142	\$	(757)	-2%	\$ 1,644	5%	\$	34,542
PBS TP14 WBS 1.4.11	Hanford Surplus Facility Program (300Area Revitalization)	\$	1,345	\$	1,079	\$	1,100	\$	(266)	-20%	\$ (21)	-2%	\$	1,345
	Total	\$	50,671	\$	49,519	\$	47,906	\$	(1,152)	-2%	\$ 1,613	3%	\$	50,671

Notes: RL-Directed costs (steam and laundry) are included in the PEM BCWS. 310 TEDF/340 Facility performance data is reported under PBS WM05 (Waste Management).

Authorized baseline is per the Integrated Planning Accountability, and Budget System (IPABS) – Project Execution Module (PEM).

#### FY TO DATE SCHEDULE / COST PERFORMANCE

The unfavorable schedule variance of \$1.2M (2 percent) is primarily due to delays with the pipe trench/robotics; crane repairs; EE/CA and DQO work scope. The favorable cost variance of \$1.6M (3 percent) is primarily due to lower than planned FY 2001 fee accruals and efficiencies realized in execution of min-safe tasks.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, Fiscal Year to Date (FYTD) Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

#### Schedule Variance Analysis: (-\$1.2M)

#### **324/327 Facility Transition** — **1.4.10/TP08**

**Description and Cause**: The unfavorable schedule variance (-\$0.7M) was the result of delays with the pipe trench planning/robotics and crane repairs work scope due to resources assigned to higher priority SWDB and 3-82B work scope.

Impact: Work scope will be postponed until FY 2002. Corrective Action: No corrective action required.

#### Hanford Surplus Facility Program − 1.4.11/TP14

**Description and Cause**: The unfavorable schedule variance (-\$0.3M) was due to the DOE-RL mandated work stoppage related to the EE/CA and DQO work scope.

**Impact**: No impact this fiscal year. Potential impact to future deactivation work scope.

**Corrective Action:** No corrective action required.

All other schedule variances are within established thresholds.

#### Cost Variance Analysis: (+\$1.6M)

#### 324/327 Facility Transition — 1.4.10/TP08

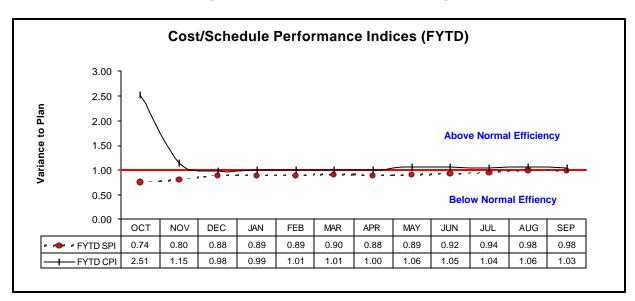
**Description and Cause**: The favorable cost variance (+\$1.6M) was due to efficiencies realized from the 327 Facility min-safe activities, lower than planned FY 2001 fee accruals, crane parts costing less than expected and favorable variance distributions received earlier in the year.

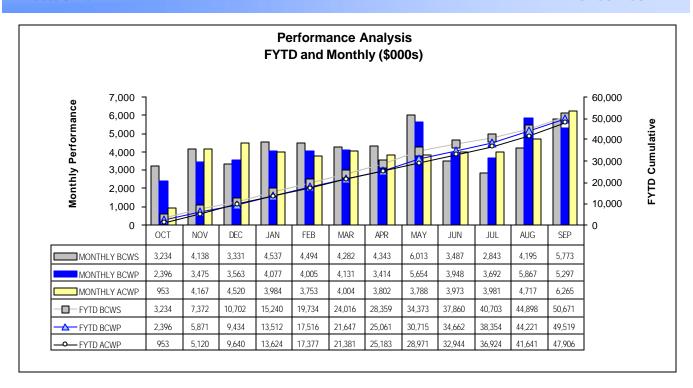
**Impact:** No Impact. Underruns will be utilized to support other high priority project work scope including outyear deactivation work scope.

**Corrective Action:** No corrective action required.

All other cost variances are within established thresholds.

## SCHEDULE / COST PERFORMANCE (MONTHLY AND FYTD)





## FUNDS MANAGEMENT FUNDS VS ACTUAL COSTS (\$000) FY 2001

		Y 2001 Funds	FY 2001 tual Costs	Uncosted		
1.4	River Corridor					
	TP01, TP04, TP08, TP10, TP12, TP14, WM05					
	Project Completion - Operating	\$ 49,257	\$ 46,293	\$	2,964	
	Post 2006 - Operating	\$ 5,637	\$ 5,194	\$	443	
	Total	\$ 54,894	\$ 51,487	\$	3,407	

[Status through September 30, 2001]

Note: Does not include RL Managed data or post-2006 TP10 (\$649).

#### **ISSUES**

Technical, Regulatory, External, and DOE Issues and DOE REQUESTS

None to report.

#### BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

PROJECT CHANGE NUMBER	DATE ORIGIN.	BCR TITLE	FY01 COST IMPACT (\$1,000)	SCH	TECH	DATE To FH CCB	FH CCB APR'VD	RL APR'VD	CURRENT STATUS
FSP-2001-056	5/24/01	Transfer of PNNL facilities to Fluor Hanford	\$526	Х	Х				RCP CCB reviewed 10/4/01 - changes to be incorporated for submittal to FHCCB.
Advanced Work Authorization									
		None							

#### **KEY INTEGRATION ACTIVITIES**

- Potential Technology Funding for 327 Building Deactivation At FY 2001 year-end, the FY 2002 planning budget for EM50's Transuranic (TRU) and Mixed Waste Focus Area (TMFA) as managed from Idaho National Engineering and Environmental Laboratory, targeted \$790K for technology tasks focused on waste equipment size reduction at Hanford. Consideration is being given to using a portion of this funding for initiatives at the 327 Building (e.g., detachment of H Cell using diamond wire cutting; removal and size reduction of an IX-column presently stored in the 327 wet basin; and removal and size reduction of heating, ventilation, and air conditioning ducting). If funded, this project would be a collaborative effort for FH, the TMFA, and PNNL/EM50's Robotics Crosscutting Group. As of September 2001, no decision had been made.
- West Valley Hot Cells Proposal Resubmitted to EM50 During 2001, and based on a request from EM50, the Large Scale Demonstration and Deployment Project proposal for West Valley (NY) hot cell deactivation was rewritten, and resubmitted on May 2, 2001, for funding consideration. This proposal was initially submitted to EM50 in September 2000, but was not selected for the first round of awards. In late August 2001, DOE announced a decision to fund this initiative. EM50 provided \$650K in September 2001 and will provide another \$650K in early FY 2002. RCP will participate on the Integrated Contractor Team for influencing hot cell technologies to be demonstrated at West Valley, and potentially transferred to Hanford (e.g., 324 and 327 Facilities). The Integrated Contractor Team is comprised of WGI / West Valley Nuclear Services, Scientech, Battelle Columbus West Jefferson Laboratory, PNNL, the US Army Corps of Engineers, and Fluor Hanford.